

28 October 1966

MEMORANDUM FOR: Director of National Estimates

ATTENTION : [REDACTED] 25X1A

SUBJECT : Submission of Tables by the NIPP
Ad Hoc Naval Working Group for
Section I of NIPP-67

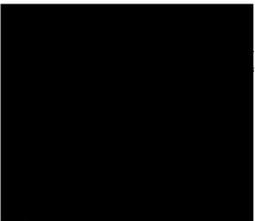
1. Submitted herewith are NIPP Tables IC 1 through IC 5. It should be noted in these tables that the previous, arbitrary division of submarines into first and second line categories has been dropped. All submarines now are carried in an operational status. Submarines will be dropped from the operational category by transfer or by retirement, using other factors in addition to the factor of age.

2. Your attention is called to the NSA reservation which reads as follows:

"The NSA representative agrees generally with the growth and change figures represented in this table but reserves on two points: (1) NSA disagrees with the 1962-1966 baseline figures preferring instead the baseline figures in the NSA footnote to NIE 11-8-66; and (2) NSA believes the growth rate of the Echo II class is and will continue to be 6 per year through at least 1968. This reservation applies to Tables IC 1 through IC 3."

*Query this
NSA has written
their reservation
to T.S. version
of 11-8-66
security reasons*

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*201/10
11/10/66*

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Chairman,
Naval Working Group

Enclosure:
As Stated

Distribution:
Orig. & 4-Addressee (ONE)
1-D/F
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25X1A

SOVIET BALLISTIC AND CRUISE MISSILE SUBMARINE FORCES
 Approved For Release 2002/01/03 : CIA-RDP79R00978A000800030014-7

NIPP-67
 TABLE IC 1

	1962	1963	1964	1965	1966	1967	1968	1969	1970	1971	1972	1973	1974	1975	1976
Ballistic Missile Submarines															
Nuclear (SSBN)															
H-I Class ^{2/}	6-8	8-10	7-9	6-7	5-5	4-3	3-1	2-0	0	0	0	0	0	0	0
H-II Class ^{3/}	0	0	1	2-3	3-5	4-7	5-9	6-10	8-10	8-10	8-10	8-10	8-10	8-10	8-10
New Class	0	0	0	0	0	0	1	2-4	5-8	8-12	11-16	14-20	17-25	21-30	25-35
Total SSBN	6-8	8-10	8-10	8-10	8-10	8-10	9-11	10-14	13-18	16-22	19-26	22-30	25-35	29-40	33-45
Diesel (SSB)															
Z-Conversion ^{2/}	7	7	7	7	7	7	7	7	7	7	6	4	2	1	0
G-I Class ^{2/}	23-25	27-30	27-30	27-30	27-30	27-30	27-30	27-29	27-28	27-26	27-24	27-21	27-16	27-16	27-16
G-II Class ^{3/}	1	1	1	1	1	1	1	1-2	1-3	1-5	1-7	1-10	1-15	1-15	1-15
Total SSB	31-33	35-38	35-38	35-38	35-38	35-38	35-38	35-38	35-38	35-38	34-37	32-35	30-33	29-32	28-31
Total SSBN and SSB	37-41	43-48	43-48	43-48	43-48	43-48	44-49	45-52	48-56	51-60	53-63	54-65	55-68	58-72	61-76
Cruise Missile Submarines ^{4/}															
Nuclear (SSGN)															
E-I Class	4	5	5	5	5	5	5	5	5	5	5	5	5	5	5
E-II Class	0	2-3	5-7	11-13	16-18	20-22	24-26	27-29	30-32	33-35	33-37	33-39	33-40	33-41	33-42
Total SSGN	4	7-8	10-12	16-18	21-23	25-27	29-31	32-34	35-37	38-40	38-42	38-44	38-45	38-46	38-47
Diesel (SSG)															
W-Conversion	10	12	13	13	13	13	13	13	12	10	8	6	5-4	5-2	5-0
J-Class	0	0	5-6	7-9	9-12	11-15	13-18	13-18	13-18	13-18	13-18	13-18	13-18	13-18	13-18
Total SSG	10	12	18-19	20-22	22-25	24-28	26-31	26-31	25-30	23-28	21-26	19-24	18-22	18-20	18-18
Total SSGN and SSG	14	19-20	28-31	36-40	43-48	49-55	55-62	58-65	60-67	61-68	59-68	57-68	56-67	56-66	56-66
Grand Total Missile Subs	51-55	62-68	71-79	79-88	86-96	92-103	99-111	103-117	108-123	112-128	112-131	111-133	111-135	114-138	117-141

^{1/} The previous distinction between first and second line submarines has been dropped. This table shows the total number of submarines by class which are estimated to be operational in any given year.

^{2/} Equipped with SS-N-4 350 n.m. surface-launched ballistic missile.

^{3/} Retrofitted SS-N-4 unit now equipped with SS-N-5 700 n.m. submerged launched ballistic missile. We consider that this retrofit may allow for the accommodation in the future of an improved missile.

^{4/} Equipped with the SS-N-3 surface-launched cruise missile. For characteristics see Table IC 7.

^{5/} The NSA representative agrees generally with the growth and change figures represented in this table but reserves the right to disagree with the 1966 baseline figures preferred instead the baseline figures in the NSA footnote to NIP-13-8-67, and (2) NSA believes the growth rate of the SSBN class is and will continue to be 8% per year through at least 1976.

SOVIET NUCLEAR-POWERED SUBMARINE
TOTAL NUMBERS OPERATIONAL BY CLASS AT MID-YEAR
Approved For Release 2002/01/03 : CIA-RDP79R00978A000800030014-7

	1962	1963	1964	1965	1966	1967	1968	1969	1970	1971	1972	1973	1974	1975	1976
Nuclear Powered Submarines 1/															
Ballistic Missile (SSEN)															
H-Class	6-8	8-10	8-10	8-10	8-10	8-10	8-10	8-10	8-10	8-10	8-10	8-10	8-10	8-10	8-10
New Class	0	0	0	0	0	0	1	2-4	5-8	8-12	11-16	14-20	17-25	21-30	25-35
Total SSEN	<u>6-8</u>	<u>8-10</u>	<u>8-10</u>	<u>8-10</u>	<u>8-10</u>	<u>8-10</u>	<u>9-11</u>	<u>10-14</u>	<u>13-18</u>	<u>16-22</u>	<u>19-26</u>	<u>22-30</u>	<u>25-35</u>	<u>29-40</u>	<u>33-45</u>
Cruise Missile (SSGN)															
E-Class	4	7-8	10-12	16-18	21-23	25-27	29-31	32-34	35-37	38-40	38-42	38-44	38-45	38-46	38-47
Torpedo-Attack (SSGN)															
N-Class	6-8	9-11	12-14	14-17	16-20	16-20	16-20	16-20	16-20	16-20	16-20	16-20	16-20	16-20	16-20
New Attack Class	0	0	0	0	0	0-1	1-3	2-5	4-8	6-11	8-15	11-20	14-25	17-30	20-35
Total SSN	<u>6-8</u>	<u>9-11</u>	<u>12-14</u>	<u>14-17</u>	<u>16-20</u>	<u>16-21</u>	<u>17-23</u>	<u>18-25</u>	<u>20-28</u>	<u>22-31</u>	<u>24-35</u>	<u>27-40</u>	<u>30-45</u>	<u>33-50</u>	<u>36-55</u>
Total Nuclear-Powered	<u>16-20</u>	<u>24-29</u>	<u>30-36</u>	<u>38-45</u>	<u>45-53</u>	<u>49-58</u>	<u>55-65</u>	<u>60-73</u>	<u>68-83</u>	<u>76-93</u>	<u>81-103</u>	<u>87-114</u>	<u>93-125</u>	<u>100-136</u>	<u>107-147</u>
Construction Rate	8-9	6-7	8-9	7-8	4-5	5-7	5-8	8-10	8-10	5-10	6-11	6-11	7-11	7-11	
Diesel Powered 2/															
Ballistic Missile (SSB)	31-33	35-38	35-38	35-38	35-38	35-38	35-38	35-38	35-38	35-38	34-37	32-35	30-33	29-32	28-31
Cruise Missile (SSG)	10	12	18-19	20-22	22-25	24-28	26-31	26-31	25-30	23-28	21-26	19-24	18-22	18-20	18-18
Torpedo Attack	314	324	306	309	283	274-276	273-277	272-278	265-273	255-265	240-250	230-240	220-230	205-215	190-200
Total Diesel-Powered	<u>355-357</u>	<u>371-374</u>	<u>359-363</u>	<u>364-369</u>	<u>340-346</u>	<u>333-342</u>	<u>334-346</u>	<u>333-347</u>	<u>325-341</u>	<u>313-331</u>	<u>295-313</u>	<u>281-299</u>	<u>268-285</u>	<u>252-267</u>	<u>236-249</u>
Grand Total	<u>371-377</u>	<u>395-403</u>	<u>389-399</u>	<u>402-414</u>	<u>385-399</u>	<u>382-400</u>	<u>389-411</u>	<u>393-420</u>	<u>393-424</u>	<u>389-424</u>	<u>376-416</u>	<u>368-413</u>	<u>361-410</u>	<u>352-403</u>	<u>343-396</u>

1/ All types of nuclear-powered submarines are listed here for information in order to show the cumulative production of nuclear-powered submarines and the allocation of this production among types. The torpedo-attack submarines are not part of the strategic attack forces. Cruise missile submarines have the capability for strategic attack.

2/ All types of diesel-powered submarines are listed here for information in order to show the total size of the submarine force. The same comments on types apply as in Footnote 1.

For the NSA reservation to the figures in this table, see Footnote 5, page 1.

NIPP-6
TABLE 1

SOVIET BALLISTIC AND CRUISE MISSILE SUBMARINE FORCES
OPERATIONAL SUBMARINES BY FLEET AREA AT MID YEAR, 1967, 1972, 1976

	1967				1972				1976			
	Northern Fleet 1/	Baltic Fleet	Black Fleet	Pacific Fleet 2/	Northern Fleet 1/	Baltic Fleet	Black Fleet	Pacific Fleet 2/	Northern Fleet 1/	Baltic Fleet	Black Fleet	Pacific Fleet 2/
Ballistic Missile Submarines 3/												
Nuclear (SSB)												
H-I Class 4/	3-2	0	0	1	0	0	0	0	0	0	0	0
H-II Class 5/	3-6	0	0	1	5-7	0	0	3	5-7	0	0	3
New Class 6/	0	0	0	0	8-11	0	0	3-5	17-24	0	0	8-11
Sub Total	6-8	0	0	2	13-18	0	0	6-8	22-31	0	0	11-14
Diesel (SSB)												
Z-Conversion 4/	4	0	0	3	4	0	0	2	0	0	0	0
G-I Class 4/	20-23	0	0	7	20-19	0	0	7-5	18-12	0	0	9-4
G-II 5/	1	0	0	0	1-5	0	0	0-2	1-10	0	0	0-5
Sub Total	25-28	0	0	10	25-28	0	0	9	19-22	0	0	9-9
Total Ballistic Missile Subs	31-36	0	0	12	38-46	0	0	15-17	41-53	0	0	20-23
Cruise Missile Submarines 3/ 7/ 8/												
Nuclear												
E-I Class	0	0	0	5	0	0	0	5	0	0	0	5
E-II Class	11-13	0	0	2	21-24	0	0	12-13	21-27	0	0	12-15
Sub Total	11-13	0	0	14	21-24	0	0	17-18	21-27	0	0	17-20
Diesel (SSG)												
W-Conversion 2/	6	3	1	3	3	2	1	2	2-0	1-0	0	2-0
J-Class	9-13	0	0	2	10-14	0	0	3-4	10-14	0	0	3-4
Sub Total	15-19	3	1	5	13-17	2	1	5-6	12-14	1-0	0	5-4
Total Cruise Missile Subs	26-32	3	1	19	34-41	2	1	22-24	33-41	1-0	0	22-24
Grand Total Missile Subs	57-68	3	1	31	72-87	2	1	37-41	74-94	1-0	0	42-47

SOVIET BALLISTIC AND CRUISE MISSILE SUBMARINE FORCES
OPERATIONAL SUBMARINES BY FLEET AREA AT MID YEAR, 1967, 1972, 1976

FOOTNOTES

1/ Distances from Kola Inlet, a Northern Fleet base: (in n.m.)

Iceland	1,500	Halifax	3,400
Iceland-UK gap	1,300	Bermuda or New York	3,800
Gibraltar	3,000	Norfolk	4,100
		Panama	5,400

2/ Distances from Pacific Fleet bases: (in n.m.)

From	To	Petropavlovsk	Vladivostok
Manila		3,100	1,900
Singapore		4,200	3,000
Honolulu		2,800	3,800
Seattle		3,000	4,300
San Francisco		3,300	4,600
Los Angeles		3,600	4,900
Panama		6,500	7,800

3/ At present the Soviets have not established any continuous patrol pattern off the coast of the continental US. If they decide to establish a routine pattern of continuous patrolling by their missile-launching submarines off the coast of the continental US, the following maximum percentages of the nuclear and diesel-powered forces could be maintained continuously on patrol stations within missile-launching range of CONUS targets. W-Conversion classes are excluded because they are limited in range to operational factors summarized in Table IC 6.

	<u>Percent of Forces</u>
Pacific Fleet-Nuclear	30
Pacific Fleet-Diesel	20-25
Northern Fleet-Nuclear	30
Northern Fleet-Diesel	12-15

- 4/ Equipped with SS-N-4 350 n.m. surface launched ballistic missile.
- 5/ Retrofitted SS-N-4 unit now equipped with SS-N-5 700 n.m. submerged launched ballistic missile. We consider that this retrofit may allow for the accommodation in the future of an improved missile.
- 6/ Probably equipped to carry a new or improved missile in eight or more launch tubes.
- 7/ Soviet cruise missile submarines were designed primarily for use against ships. However, they can be used for attack against land targets. These same submarines are listed also under Section III, Soviet General Purpose Naval Forces. The manpower, cost, and nuclear weapons implications of these submarines are included only under General Purpose Forces.
- 8/ Equipped with the SS-N-3 surface-launched cruise missile. For characteristics see Table IC 7.
- 9/ The several types of W-Conversion submarines are located as follows:

<u>Northern Fleet</u>	<u>Pacific Fleet</u>	<u>Baltic Fleet</u>
W Single Cylinder - 1	W Twin Cylinder - 1	W Long Bin - 3
W Twin Cylinder - 3	W Long Bin - 2	
W Long Bin - 2		
<u>Black Sea Fleet</u>		
W Twin Cylinder - 1		

~~10/ For the NSA reservation to the figures in this table see Footnote 5, Table IC P.~~

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TABLE IC 4SOVIET BALLISTIC AND CRUISE MISSILE SUBMARINE FORCES
PERSONNEL AND GUIDED MISSILE INVENTORIES PER UNIT

<u>Submarines</u>	<u>Crew</u>	<u>Direct Support</u>	<u>Total</u>	<u>SS-N-3 or Follow-on</u>	<u>SS-N-4</u>	<u>SS-N-5 or Follow-on</u>	<u>New Missile or Follow-on</u>
Z-Conversion	80	55-105	135-185	--	2	--	--
G-I	85	60-110	145-195	--	3	--	--
G-II	85	60-110	145-195	--	--	3 ^{1/}	--
H-I	100	70-130	170-230	--	3	--	--
H-II	100	70-130	170-230	--	--	3	--
New Class	110	75-145	185-255	--	--	--	8 ^{4/}
W-Conversion	60	40-50	100-140	2 or 4 ^{2/}	--	--	--
J	80	55-105	135-185	4	--	--	--
E-I	100	70-130	170-230	6	--	--	--
E-II	100	70-130	170-230	8	--	--	--
Additional Missiles in Inventory ^{3/} (per operational launcher)	--	--	--	1.0	0.25	0.25	0.25

^{1/} One G-II class submarine was converted to carry two SS-N-5.

^{2/} See footnote following Table IC 6 for a description of the several W-Conversion types.

^{3/} We assume 0.25 missiles per operational launcher are aboard support ships or on shore as maintenance spares. In the case of the cruise missile force, we assume an additional 0.75 missiles per launcher to provide replenishment for succeeding missions.

^{4/} This class may have 8 or more tubes.

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TABLE IC 5

SOVIET SUBMARINE BALLISTIC MISSILES
TOTAL LAUNCHERS AND OPERATIONAL MISSILE INVENTORY BY SYSTEM AT MID-YEAR ^{1/}
AS = Launchers and Missiles Aboard Submarines ^{2/}
R = Operational Reserve (Maintenance Spares) ^{3/}

SYSTEM	1962		1963		1964		1965		1966		1967		1968		1969	
	AS	R														
<u>SS-N-4</u> ^{4/}																
Aboard SSEN	18-24		24-30		21-27		18-21		15-15		12-9		9-3		6-0	
Aboard SSB	<u>83-89</u>		<u>95-104</u>		<u>95-101</u>											
Total	101-113	28	119-134	34	116-131	33	113-125	31	110-119	30	107-113	28	104-107	27	101-101	25
<u>SS-N-5</u> ^{5/}																
Aboard SSEN	0		0		3		6-9		9-15		12-21		15-27		18-30	
Aboard SSB	<u>2</u>		<u>2-5</u>													
Total	2	1	2	1	5	1	8-11	3	11-17	4	14-23	6	17-29	7	20-35	9
<u>New</u> ^{6/}																
Aboard SSEN	0		0		0		0		0		0		8	2	16-32	8
<u>Total Ballistic Missiles</u>	<u>103-115</u>	<u>29</u>	<u>121-136</u>	<u>35</u>	<u>121-136</u>	<u>34</u>	<u>121-136</u>	<u>34</u>	<u>121-136</u>	<u>34</u>	<u>121-136</u>	<u>34</u>	<u>129-144</u>	<u>36</u>	<u>137-168</u>	<u>42</u>

^{1/} For cruise missile inventories, see Table IIID 14.

^{2/} The "aboard-submarine" inventory equals one submarine fill (one missile per tube) for each submarine shown in Table IC 2, with the number of tubes per ship as indicated in Table IC 6.

^{3/} This operational reserve is assumed to be for maintenance purposes only; no additional reserve for refire is assumed. The "operational reserve," which is not in inventory has been computed at an assumed rate of 25 percent of the high end of "aboard-submarine" inventory.

^{4/} The SS-N-4 is a 350 n.m. surface-launched ballistic missile.

^{5/} The SS-N-5 is a 700 n.m. submerged-launched ballistic missile.

^{6/} We have arbitrarily assigned this missile only to the new class SSEN. The estimate assumes eight missiles per submarine.

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TABLE IC 5 (Continued)

SOVIET SUBMARINE BALLISTIC MISSILES
TOTAL LAUNCHERS AND OPERATIONAL MISSILE INVENTORY BY SYSTEM AT MID-YEAR 1/ (Continued)
AS = Launchers and Missiles Aboard Submarines 2/
R = Operational Reserve (Maintenance Spares) 3/

SYSTEM	1970		1971		1972		1973		1974		1975		1976	
	AS	R	AS	R	AS	R	AS	R	AS	R	AS	R	AS	R
SS-N-4 4/ Aboard SSBN Aboard SSB	0 <u>95-98</u>		0 <u>95-92</u>		0 <u>93-84</u>		0 <u>89-71</u>		0 <u>85-52</u>		0 <u>83-50</u>		0 <u>81-48</u>	
Total	95-98	24	95-92	24	93-84	23	89-71	22	85-52	22	83-50	21	81-48	20
SS-N-5 5/ Aboard SSBN Aboard SSB	24-30 <u>2-9</u>		24-30 <u>2-14</u>		24-30 <u>2-20</u>		24-30 <u>2-29</u>		24-30 <u>2-44</u>		24-30 <u>2-44</u>		24-30 <u>2-44</u>	
Total	26-39	10	26-44	11	26-50	12	26-59	15	26-74	19	26-74	19	26-74	19
New 6/ Aboard SSBN	40-64	16	64-96	24	88-128	32	112-160	40	136-200	50	168-240	60	200-280	70
<u>Total Ballistic Missiles</u>	<u>161-201</u>	<u>50</u>	<u>185-232</u>	<u>59</u>	<u>207-262</u>	<u>67</u>	<u>227-290</u>	<u>77</u>	<u>247-326</u>	<u>91</u>	<u>277-364</u>	<u>100</u>	<u>307-402</u>	<u>109</u>